

In the Specification:

Please amend paragraphs [0028], [0037], [0044], [0051] and [0054] as indicated below.

[0028] Each network device 104 may include one or more input ports for coupling to other network devices 104 and/or endpoints 102. Each network device 104 may also include one or more output ports for connecting to one or more other network devices 104 or endpoints 102. An endpoint device 102 may send a data communication to be sent through network 100 to another endpoint 102. The communication may include one or more data units, datagrams, cells, packets, etc. The term “cell” is used herein to refer to any type of data unit, datagram, packet, or other data configuration communicated as a unit through network 100. A network device 104 may receive cells at its input ports and route or switch each cell to its appropriate output port, for example, according to address information or other routing or switching information included with or within each cell. In some embodiments each physical port on a network device 104 may handle multiple different communication channels (e.g. ~~broad-band~~ broadband communication). In other embodiments each physical port may handle only a single communication channel.

[0037] Turning now to Figure 3, an example of entries in memory 210 for each channel is illustrated. Memory 210 may store policing parameters 302 and rollover data for each channel in table 300. For example, the policing parameters may include a theoretical arrival time value (TAT), an increment value (I) and a limit value (L). The theoretical arrival time may be calculated according to the cell rate that has been negotiated, set, or otherwise configured for the particular channel. For example, a channel may be a constant bit rate channel for which a maximum cell rate has been negotiated, e.g., 1K cells per second. The policing parameter I corresponds to the amount by which the theoretical arrival time may be incremented after each cell is received. For example, if the channel has a 1K cell/second rate, then I may equal one millisecond. The policing parameter L may represent a limit during which a cell may be received early and

still be considered conforming. Thus, if a cell is received within L of the TAT it may be conforming.

[0044] Turning now to Figures 5A-5C a method for processing newly arrived cells in a network device is illustrated which accounts for rollovers according to one embodiment. The method of Figures 5A-5C may be implemented by cell processing unit 208. When a new cell is received, as indicated at 500, the policing and rollover data for the channel on which the cell was received may be accessed, as indicated at 502. The method includes determining whether or not the rollover data has been updated for that channel, as indicated at 504. If the V bit of the rollover data is equal to the VerID global register bit 206 then the rollover data is current and cell processing continues as illustrated in Figure 5B. If the rollover data is not current (V not equal to VerID) then the rollover data must first be updated before cell processing continues. The V bit is set to equal the global VerID bit as indicated at 508 and the R or B bit is updated as indicated at ~~510-514~~ 510, 512 and 514.

[0051] Figure 7 illustrates the channel table 700 that may be stored in memory 616. The table may include policing parameters 702 and rollover data 704 for each channel. The policing parameters may include a theoretical arrival time, increment value, and limit value for each channel as described in regard to Figures 2-5C. The rollover data may include bits for indicating the rollover phase relationship of the global timer value and the theoretical arrival time for each channel and for indicating the update version of the rollover data for each channel, such as the R-B-V bits described in regard to Figures 2-5C. Each channel table entry may also include operation and maintenance data 706.

[0054] When the global timer value rolls over, the VerID 606 is toggled and the global timer rollover indicator 608 is set, as indicated at 800 and 802 in Figure 8. As discussed above, scanning function unit 610 may perform an operations and maintenance (OAM) scan of the channel table in memory 616. This table scan may be performed at least once per global timer rollover phase. Figure 9 illustrates an operation and maintenance scan which includes updating the rollover data for each channel. At the

beginning of an operation and maintenance scan 900 the global timer rollover indicator 608 may be checked as indicated at 902. If the global timer rollover indicator 608 is not set then the regular operation and maintenance functions are performed for each channel as indicated at 917 and 919. If the global timer rollover indicator 608 is set then the rollover data may be updated (~~904-914~~ 904, 906, 908, 910, 912 and 914) along with performing the operation and maintenance functions (916) for each channel (918). After the channel table in memory 616 has been completely scanned, the global timer rollover indicator 608 is cleared as indicated at 920. The rollover data update (~~904-914~~ 904, 906, 908, 910, 912 and 914) may be performed as described in regard to ~~404-414~~ 404, 406, 408, 410, 412 and 414 of Figure 4.